


Spur Gear

Pressure Angle 20°, Module 3.0 Shaft Bore Configurable Type

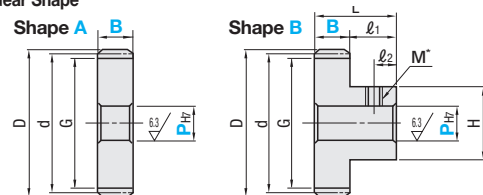


Type		Material	Surface Treatment	Accessory
Straight Bore	Keyway, Keyway + Tap	EN 1.1191 Equiv.	-	Set Screw (EN 1.7220 Equiv., Black Oxide)
GEAHB	GEAKB		-	
GEAHBB	GEAKBB		Black Oxide	
GEAHBG	GEAKBG	EN 1.4301 Equiv.	Electroless Nickel Plating	Set Screw (EN 1.4301 Equiv.)
GEAHS	GEAKS		-	

⚠ Set Screw is not included in Un-tapped Type products.

Gear Shape

Shape A B Shape B B ℓ₁ ℓ₂ M' H



Shaft Bore Specifications (Selectable Gear Shapes)

Straight Bore (Shape A, Shape B)	Keyway (Shape A)	Keyway + Tap (Shape B)

⚠ Keyway Dimension Details **P.1498**
⚠ Positioning of keyway and teeth is not fixed.

Accuracy Previous JIS B 1702 Class 4
(New JIS B 1702-1 Class 8 Equiv.)

RoHS10 ⚠ Tapped shaft bores are not available for Shape A.

For alterations on tooth width and hub dimensions, see **P.1513**.

Part Number	Number of Teeth	B	Gear Shape	Shaft Bore Dia. PH7 (1mm Increment)		d Reference Dia.	D Tip Dia.	G Root Dia.	H	L	ℓ ₁	ℓ ₂	M (Coarse)	*1. Allowable Transmission Force (N·m) Bending Strength										
				Straight Bore	Keyway Keyway + Tap									EN 1.1191 Equiv.	EN 1.4301 Equiv.									
Straight Bore (Shape A, Shape B) GEAHB GEAHBB GEAHBG GEAHS Keyway (Shape A) Keyway + Tap (Shape B) GEAKB GEAKBB GEAKBG GEAKS	3.0	30	A B	8~17	8N~12N	36	42	28.5	27	48	18	9	M5	66.66	38.04									
																14	8~22	8N~16N	42	48	34.5	32	86.33	49.27
																15	8~24	8N~19N	45	51	37.5	35	96.70	55.18
																16	8~28	8N~23N	48	54	40.5	40	107.10	61.12
																17			51	57	43.5	40	117.74	67.19
																18	8~30	8N~25N	54	60	46.5	44	128.50	73.33
																19	8~31	8N~26N	57	63	49.5	45	139.28	79.48
																20	8~35	8N~31N	60	66	52.5	50	150.49	85.88
																21	8~36	8N~33N	63	69	55.5	52	161.57	92.20
																22	8~37	8N~34N	66	72	58.5	54	173.02	98.74
																23	8~39	8N~35N	69	75	61.5	56	184.17	105.09
																24	8~40	8N~37N	72	78	64.5	58	195.60	111.62
																25	8~42	8N~38N	75	81	67.5	60	207.33	118.31
																26	10~45	10N~42N	78	84	70.5	65	219.36	125.18
																27			81	87	73.5	65	230.80	131.71
																28	10~49	10N~45N	84	90	76.5	70	243.41	138.90
																29			87	93	79.5	70	254.32	145.13
																30	10~52	10N~48N	90	96	82.5	75	266.40	152.02
																32			96	102	88.5	75	288.88	164.85
																34	12~56	12N~50N	102	108	94.5	80	315.62	180.11
																35			105	111	97.5	80	327.41	186.84
																36			108	114	100.5	80	337.93	192.84
																38	12~59	12N~50N	114	120	106.5	80	363.48	207.42
																40			120	126	112.5	80	386.49	220.55
																42	20~59	20N~50N	126	132	118.5	85	411.47	234.81
																44			132	138	124.5	85	436.93	249.34
																45			135	141	127.5	85	449.84	256.70
																46			138	144	130.5	85	462.87	264.14
																48			144	150	136.5	85	487.20	278.02
																50			150	156	142.5	85	511.77	292.04
																52			156	162	148.5	85	536.60	306.21
																54			162	168	154.5	85	561.67	320.52
																55			165	171	157.5	85	575.63	328.44
																56			168	174	160.5	85	589.57	336.44
																58			174	180	166.5	85	612.58	349.57
																60			180	186	172.5	85	638.40	364.31
																*62	186	192	178.5	85	661.55	-		
																*64	192	198	184.5	85	684.00	-		
																*65	195	201	187.5	85	699.95	-		
																*68	204	210	196.5	90	759.95	-		
																*70	210	216	202.5	90	808.06	-		

- * marked number of teeth is not available for GEAKS, GEAKS.
- ⚠ Shaft bore diameter 9N is not available for Keyway Bore + Tap.
- ⚠ Specify 10K as the P dimension if keyway width of 4.0mm (height 1.8mm) for Keyway + Tap with shaft bore diameter of 10 is desired. **P.1498**
- *1 Allowable Transmission Forces in the table are reference values calculated with prescribed conditions. For conditions, see **P.1498**.

Ordering Example

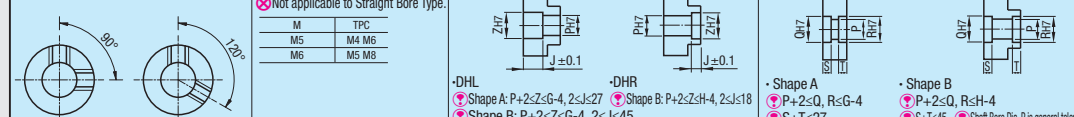
Part Number	Number of Teeth	B	Gears Shape	P
GEAHB3.0	15	30	B	8
GEAKBG3.0	30	30	A	10N

Number of Teeth	Unit Price							
	Straight Bore				Keyway, Keyway + Tap			
	GEAHB	GEAHBB	GEAHBG	GEAHS	GEAKB	GEAKBB	GEAKBG	GEAKS
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Alterations Part Number - Number of Teeth - B - Gear Shape - P - (KC90, KC120, TPC, DHL, DHR, WDH, LFC, LTC, KFC, KTC, QFC, QTC)

GEAHB3.0 - 30 - 30 - A - 20 - KFC40 - K6.0

Alterations Code	Set Screw KC90, KC120	Tapped Hole Dimension TPC	Stepped Hole DHL, DHR	Both Ends Stepped Bore WDH
Spec.	KC90: Adds another set screw at 90° position. KC120: Adds another set screw at 120° position. ⚠ Not applicable to Shape A ⚠ Not applicable to Straight Bore Type.	Changes the tapped hole dimension. Ordering Code: TPC4 ⚠ Not applicable to Shape A. ⚠ Not applicable to Straight Bore Type.	Changes shaft bores to stepped bores. (Z: 1mm Increment, J: 0.1mm Increment) Ordering Code: DHL-Z20-J4.0 ⚠ Applicable to Straight Bore Type Only.	Changes shaft bores to both ends stepped hole. (Q, R, S, T: 1mm Increment) ⚠ S, T ≥ 3 Ordering Code: WDH-Q10-R10-S5-T5 ⚠ Applicable to Straight Bore Type Only.



Alterations Code	Side Slotted Hole LFC, LTC	Side Through Hole KFC, KTC	Side Tapped Hole QFC, QTC
Spec.	Machines slotted holes on the side surface (30°). (LFC, LTC: 1mm Increment) ⚠ Applicable to Shape A only. ⚠ P+K+4 ≤ LFC(LTC) ≤ G-C-4 M Selection: M3 M4 M5 M6 Ordering Code: LFC20-M3	Machines through holes on the side surface. (KFC, KTC: 1mm Increment, K: 0.5mm Increment) ⚠ Applicable to Shape A only. ⚠ P+K+4 ≤ KFC(KTC) ≤ G-K-4 K Selection: K3.0-K6.0 Ordering Code: KFC20-K3.5	Machines tapped holes on the side surface of the gear (QFC, QTC: 1mm Increment). ⚠ Applicable to Shape A only. ⚠ P+M+4 ≤ QFC(QTC) ≤ G-M-4 M Selection: M3, M4 Ordering Code: QFC25-M3 ⚠ Tapped Hole Depth Mx1.5

